Improved formulation for admittance of thin and short monopole driving from coaxial line into dissipative media.

Abstract

An improved formulation of the admittance equation for small and thin monopole is presented where the coefficient of the capacitive correction term can be calculated directly from the values of the inner and outer radius of the coaxial line. The results were found to agree well with measurements and the finite element method (FEM). Some rules, features, and limitations of the improved formula are also discussed.

Keyword: End correction; Input admittance; Monopole; Open-ended coaxial line.